

# PSH14RT Scan Head

Focusing on high-end industrial laser applications



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## Typical Applications:

PSH14RT scan head is specifically developed for laser resistor trimming. It is suitable for resistor trimming applications that require the curvature of less than  $\pm 1.5 \mu\text{m}$  and a line spacing accuracy of less than  $\pm 1.5 \mu\text{m}$ .

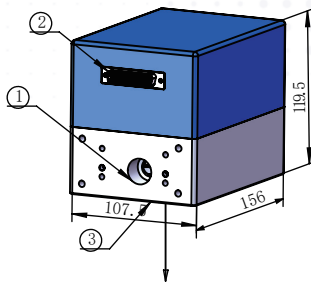
The product is featured with the compact, light-weighted design while delivering good cost-effectiveness and high speed.

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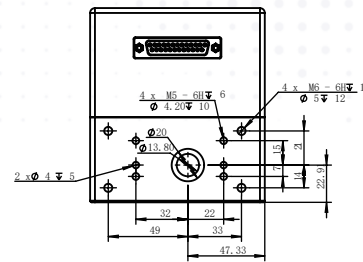
## Mechanical Drawings (Dimensions in mm)



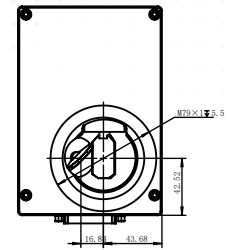
PSH14RT Scan Head

### Legend :

- 1.Beam in
- 2.Electrical interface  
(XY2-100, power in)
- 3.Beam out



Beam In & Mounting Bracket



Beam Exit Side

## Specifications

Specifications	PSH14RT
Maximum allowed average laser power <sup>(1)</sup>	500 W
Aperture	14 mm
Typical scan angle <sup>(2)</sup>	± 10 °
Tracking error	≤ 0.25 ms
Step response time (1% of full scale )	≤ 0.5 ms
<b>Speed</b>	
Positioning / Jump <sup>(3)</sup>	< 9 m/s
Line scan <sup>(3)</sup>	< 9 m/s
Vector scan <sup>(4)</sup>	< 2 m/s
Good writing quality <sup>(3)(5)</sup>	600 cps
<b>Precision</b>	
Linearity	99.9 %
Repeatability	2 μrad
<b>Temperture drift</b>	
Offset	20 μrad/°C
Gain	20 μrad/°C
<b>Long-term drift (at constant ambient temperature around 25 °C )</b>	
Over 8 hours long-term offset drift (after 30 mins warm-up)	40 μrad
Over 8 hours long-term gain drift (after 30 mins warm-up)	60 μrad
Operating Temperature Range	25 °C ± 10 °C
Signal interface	Analog: ± 10 V or ± 5 V Digital: XY <sub>2</sub> - 100, PRS422 protocol
Input power requirement (DC)	± 15 V @ 5 A Max RMS

### Note:

- (1) For laser wavelength 1030-1090 nm.
- (2) All angles are in mechanical degrees.
- (3) With F-Theta objective f = 163 mm. Speed value varies correspondingly with different focal lengths.
- (4) Repeatability and temperature drift are measured within this speed.
- (5) Single-stroke font with 1 mm height.